

TABLE 12-56
COMPARISON OF ANALYTE CONCENTRATIONS AT TOXICITY TEST LOCATIONS WITH SEDIMENT BENCHMARKS
MARINE BASIN

REMEDIAL INVESTIGATION REPORT
STRATFORD ARMY ENGINE PLANT
STRATFORD, CONNECTICUT

LEPTOCHEIRUS TOXICITY RESULTS	Concentration (mg/kg)				Hazard Quotient (HQ)			
	SDMB001A 5/20/1999	SDMB002A 5/20/1999	SDMB003A 5/18/1999	SDMB004A 5/18/1999	SDMB001A 5/20/1999	SDMB002A 5/20/1999	SDMB003A 5/18/1999	SDMB004A 5/18/1999
Compound	ERM (mg/Kg)							
Aluminum		14200	8680	5790 J	6260 J			
Arsenic	70	7	4	3.9	1.8	0.1	0.06	0.06
Barium		57.6 B	33.5 B	37.4 B	23.7 B			
Cadmium	9.6	2.3	1.2	1.3 B	0.58 B	0.2	0.1	0.1
Chromium	370	122	52.1	113 N	25.5 N	0.3	0.1	0.3
Copper	270	231	110	313	88.5	0.9	0.4	1.2
Iron		28300	15200	14000 J	9840 J			
Lead	218	85.8	37.3	84.5	18.2	0.4	0.2	0.4
Mercury	0.71	0.36 B	0.21 B	0.46 B	0.07 U	0.5	0.3	0.6
Methyl mercury		0.00213	0.00276	0.00332	0.00097			
Nickel	51.6	30.6	15.6	18.4 N	9.8 N	0.6	0.3	0.4
Selenium		1.9	1	1.3 BN	0.66 BN			
Vanadium		42.4	22.2	25.2	16.6			
Zinc	410	235	117	190 N	93.5 N	0.6	0.3	0.5
Acetone		0.24	0.079	0.075 J	0.005 U			
2-Methylnaphthalene	0.67	0.45	0.25 P	0.23 P	0.5 PJ	0.7	0.4	0.3
Acenaphthene	0.5		1.4 P	1.2 P	0.45 P	1.3 J	2.8	2.4
Anthracene	1.1	0.16 P	0.097	0.036 P	0.16 J	0.1	0.1	0.03
Benzo[a]anthracene	1.6	0.42	0.39 D	0.21	0.46 DJ	0.3	0.2	0.1
Benzo[a]pyrene	1.6	0.73 D	0.6 D	0.34	0.66 DJ	0.5	0.4	0.2
Benzo[b]fluoranthene		0.71	0.57 PD	0.24 P	0.63 DJ			
Benzo[ghi]perylene		0.49	0.37	0.21	0.44 PJ			
Benzo[k]fluoranthene		0.32 P	0.25	0.15 P	0.28 PJ			
Chrysene	2.8	0.45 P	0.5 D	0.26	0.64 DJ	0.2	0.2	0.1
Dibenz[a,h]anthracene	0.26	0.059 P	0.045 P	0.03 P	0.05 PJ	0.2	0.2	0.1
Fluoranthene	5.1	0.92	0.85 D	0.46	0.92 DJ	0.2	0.2	0.1
Fluorene	0.54	0.027 P	0.017 P	0.016 P	0.047 PJ	0.05	0.03	0.03
Indeno[1,2,3-cd]pyrene		0.39	0.28	0.15	0.44 DJ			
Phenanthrene	1.5	0.59	0.4 D	0.19	0.55 DJ	0.4	0.3	0.1
Pyrene	2.6	1.2 D	0.88 D	0.59	1 DJ	0.5	0.3	0.2
Total PAHs	44.792	8.41	6.82	3.7	8.19	0.2	0.2	0.1
Aroclor-1248		0.032 U	0.018 U	0.032 U	0.032 P			
Aroclor-1254		0.011 U	0.026	0.012 U	0.14			
Aroclor-1260		0.048	0.03	0.18	0.044 P			
Total PCBs	0.18	0.13	0.0974	0.262	0.24	0.7	0.5	1.5
Total Organic Carbon (TOC)		174000	37900	201000	10100			1.3
Percent Fine Grain (<0.074 mm)		97	43	78	15			

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Notes:

All concentrations in mg/kg

* - Growth is mean dry weight (mg/surviving organism; std. dev. not shown)

** - Mean Fecundity is % females with eggs

a - Significantly different from the control based on percent survival.

b - Samples that had no surviving organisms or significantly less survival than the control are not included in statistical analyses.

c - Sample had no surviving mature females.

d - Sample was not analyzed for offspring production because sample was already significantly different from the control based on survival.

B - report value less than Contract Required Detection Limit but greater than or equal to the Instrument Detection Limit

D - Dilution

J - estimated value

N - Tentatively Identified Compound

P - a greater than 25% difference was detected between GC columns

U - Not detected at detection limit

W - post-digestion spike (analytical spike) is out of control limits (85%-115%), while sample absorbance is less than 50% of "spike" absorbance

NA - not applicable / not available